

*Attorney Docket No.: 42.P16732  
Application No.: 10/749,624  
Page 2*

**IN THE CLAIMS:**

This listing of claims will replace all prior versions and listings of claims in the application.

1. (currently amended) A transmitter, comprising:  
an encoder to encode and disassociate data; and  
an adaptive subcarrier modulator coupled to the encoder to adaptively select one or more subcarrier modulation schemes based on at least one condition of a communication channel; and  
a media access controller coupled to the encoder.
2. (original) The transmitter of claim 1, wherein the encoder includes:  
a low density parity check (LDPC) portion.
3. (original) The transmitter of claim 2, wherein the LDPC portion includes:  
a plurality of bit nodes to receive the data, and  
a plurality of check nodes selectively connected to the plurality of bit nodes.
4. (original) The transmitter of claim 1, wherein the adaptive subcarrier modulator implements an adaptive bit loading (ABL) modulation scheme.
5. (original) The transmitter of claim 1, wherein the transmitter does not include an interleaver.
6. (canceled)
7. (original) The transmitter of claim 1, further comprising:  
an orthogonal frequency division multiplexing (OFDM) physical layer interface coupled to an output of the adaptive subcarrier modulator.

Attorney Docket No.: 42.P16732  
Application No.: 10/749,624  
Page 3

8. (currently amended) A receiver, comprising:  
an orthogonal frequency division multiplexing (OFDM) physical layer interface; and  
a forward error correction (FEC) decoder coupled to the OFDM physical layer interface  
to implement low density parity checking; and  
a media access controller coupled to the FEC decoder.
9. (original) The receiver of claim 8, further comprising:  
an adaptive subcarrier demodulator coupled between the FEC decoder and the OFDM  
physical layer interface.
10. (original) The receiver of claim 8, wherein the adaptive subcarrier demodulator  
implements an adaptive bit loading (ABL) demodulation scheme.
11. (original) The receiver of claim 8, wherein the receiver does not include a  
deinterleaver.
12. (canceled)
13. (currently amended) An apparatus, comprising:  
an orthogonal frequency division multiplexing (OFDM) physical layer interface; and  
an adaptive subcarrier demodulator or an adaptive subcarrier modulator coupled to the  
OFDM physical layer interface to implement adaptive bit loading (ABL); and  
a decoder or an encoder coupled to the adaptive subcarrier demodulator or to the adaptive  
subcarrier modulator to implement low density parity checking; and  
a media access controller coupled to the adaptive subcarrier demodulator or to the  
adaptive subcarrier modulator.
14. (original) The apparatus of claim 13, further comprising:

*Attorney Docket No.: 42.P16732  
Application No.: 10/749,624  
Page 4*

an amplifier coupled to the OFDM physical layer interface.

15. (canceled)

16. (original) The apparatus of claim 13, wherein the apparatus does not include a deinterleaver or an interleaver.

17-20. (canceled)

21. (original) A method in an orthogonal frequency division multiplexing (OFDM) system, comprising:

encoding information with a low density parity check (LDPC) code;  
detecting a channel condition for one or more OFDM subcarriers; and  
selecting a modulation scheme for the encoded information on one or more OFDM subcarriers based on the detected channel condition.

22. (original) The method of claim 21 wherein the selecting includes:

selecting a modulation scheme for a group of two or more OFDM subcarriers based upon a detected channel condition for at least one of the two or more OFDM subcarriers.

23. (original) The method of claim 21 wherein the selecting includes:

selecting the modulation scheme via adaptive bit loading (ABL).